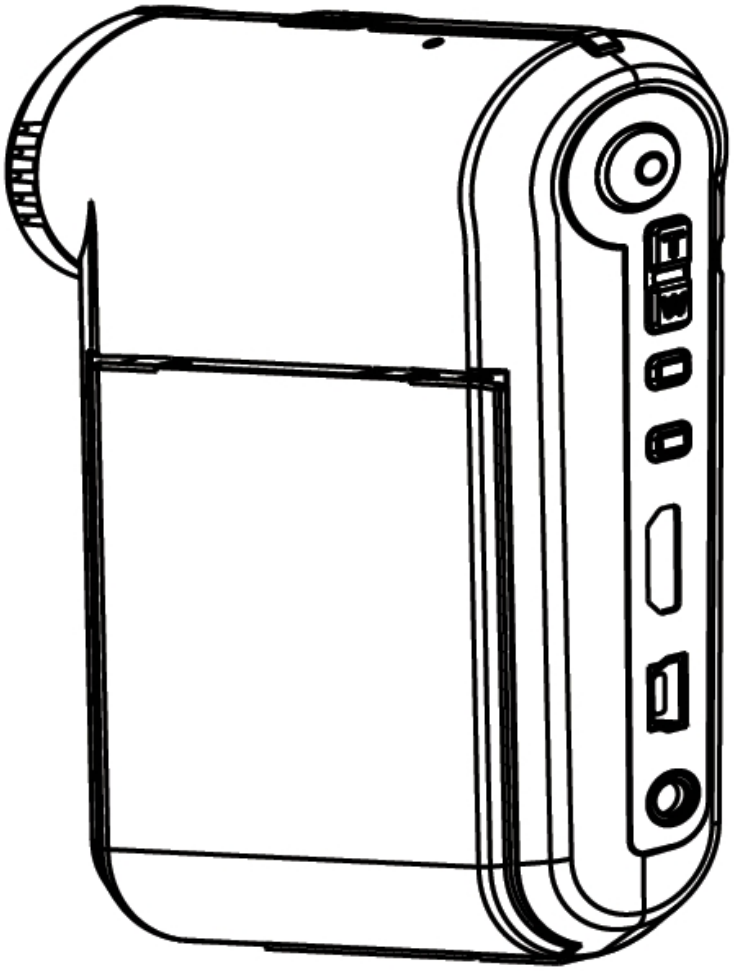


Digital Camcorder

User's Manual

Welcome:

Dear user, thanks for purchasing this product.
Much investment in time and effort has gone into its development, and it is our hope that it will give you many years of trouble-free service.

Safety Notice:

1. Do not drop, puncture or disassemble the camcorder; otherwise the warranty will be voided.
2. Avoid all contact with water, and dry hands before using.
3. Do not expose the camcorder to high temperature or leave it in direct sunlight. Doing so may damage the camcorder.
4. Use the camcorder with care. Avoid pressing hard on the camcorder body.
5. For your own safety, avoid using the camcorder when there is a storm or lightning.
6. Do not use batteries of different specifications. Doing so may lead to the potential for serious damage.
7. Remove the battery during long periods between usage, as a deteriorated battery may affect the functionality of the camcorder.
8. Remove the battery if it shows signs of leaking or distortion.
9. Use only the accessories supplied by the manufacturer.
10. Keep the camcorder out of the reach of infants.
11. Risk of explosion if battery is replaced by an incorrect type.
12. Dispose of used batteries according to the instructions.

FCC Compliance Statement:
This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Move the equipment away from the receiver.
-Plug the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/television technician for additional suggestions.

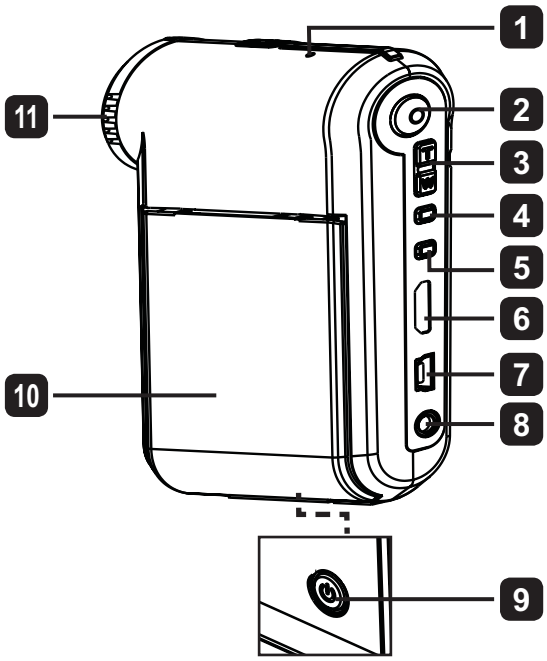
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

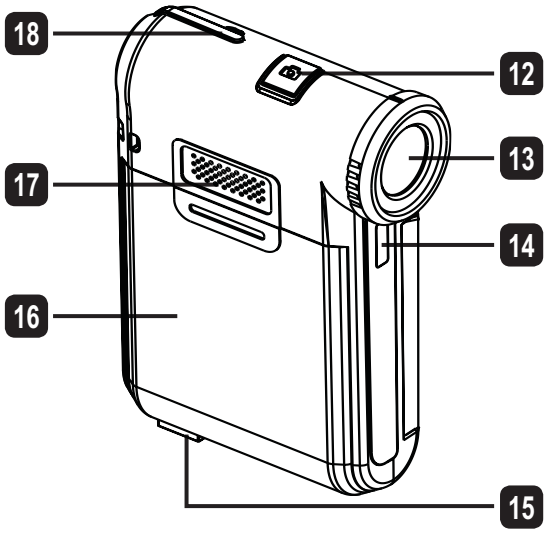
If the time arises to throw away your product, please recycle all the components possible. Batteries and rechargeable batteries are not to be disposed in your domestic waste! Please recycle them at your local recycling point. Together we can help to protect the environment.

Getting Started

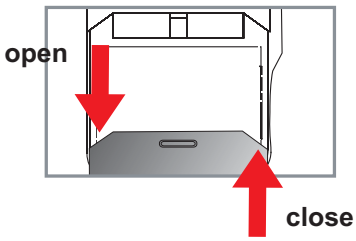
Parts of the camcorder

1. Microphone
2. Record button (⦿)
3. Up & Down / Zoom buttons (T/W)
4. Menu/OK button
5. Mode/Return button
6. HDMI port
7. USB port
8. TV-out connector
9. Power button (under LCD panel)
10. LCD panel
11. Focus switch
12. Shutter button (📷)
13. Lens
14. Flash strobe
15. Tripod socket
16. Battery compartment / SD/MMC card slot
17. Speaker
18. LED indicator



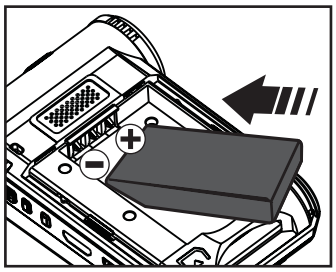


Loading the battery

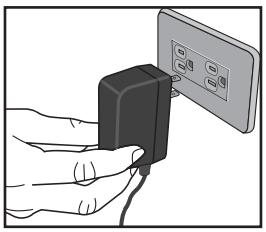


Note: Upon using the battery for the first time, you are recommended to fully discharge and then charge the battery for 8 hours to ensure its lifecycle.

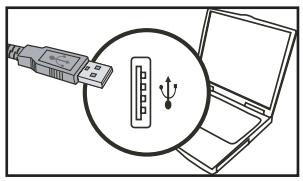
1. Slide open the battery compartment cover as indicated.
2. Place the accessory Li-Ion battery into the compartment. Note that the metallic contacts must be aligned with the contacts in the compartment.
3. Replace the cover.



Charging battery



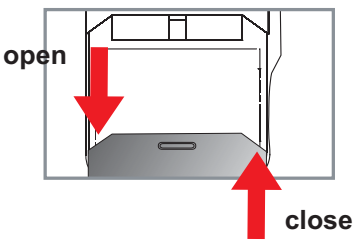
1. Connect one end of the cable to the USB port of the camcorder.
2. Plug the AC adapter to a wall outlet, or connect the other end of the USB cable to the PC that has been powered on.
3. The charge starts. The LED indicates red light during charging. When the battery is fully charged, the LED light will go out.

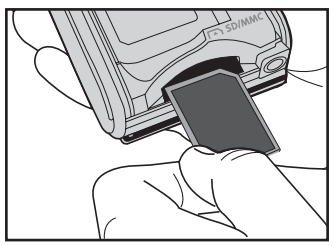


Note: When using a PC to charge the battery, do not power on the camcorder or the charge will stop.

Inserting the SD/SDHC/MMC card (optional)

1. Slide open the battery compartment cover.
2. Insert the card in the direction of indication until it reaches the end of the slot.
3. When using a SD card, the built-in memory will become inaccessible.
4. To remove the SD card, gently push the card until it pops up.

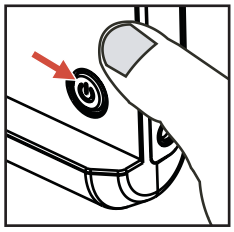




Basic Operations

Turning on/off the camcorder

Open/Close the LCD panel to turn on/off; or press and hold down the **Power** button for 3 seconds.



Mode selection

1. Turn on the camcorder.
2. Press the **Mode** button.
3. Use the **Zoom** buttons to select the desired item.
4. Press the **Menu/OK** button to confirm.
5. By pressing the **Mode** button you can switch mode:
   Setting ( ); Camera ( ); My Works ( ); Voice Recorder ( ); **Music Player**★ ( ).

★ **For select model only. Please refer to the package printing for detailed specification.**

Setting language

Power-on → Press the **Mode** button → Enter the **Setting** mode → Use the **Zoom** buttons to select the **Language** item → Use the **Zoom** buttons to select a suitable language and press the **Menu/OK** button to confirm.

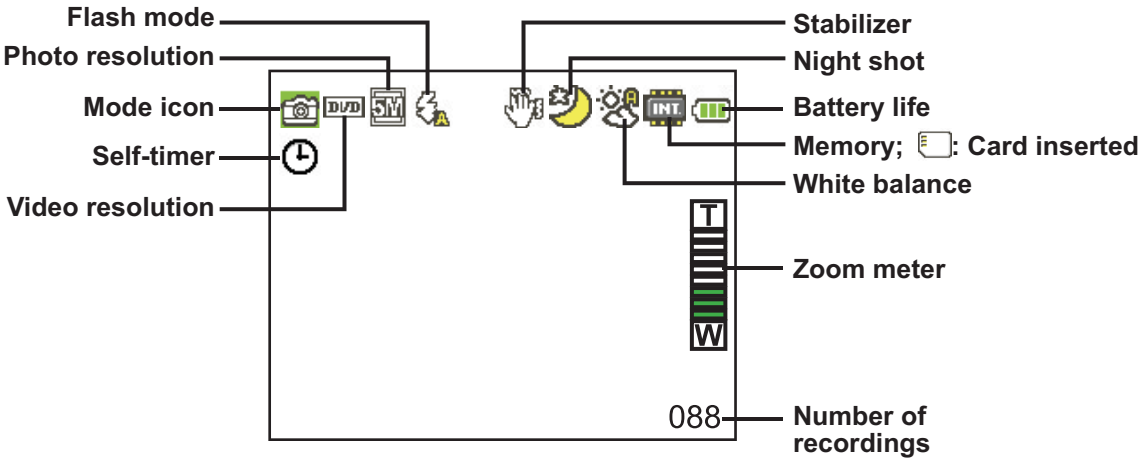
Battery life indicator

Icon	Description
	Full battery life
	Moderate battery life
	Low battery life
	Empty battery life
	Charging battery

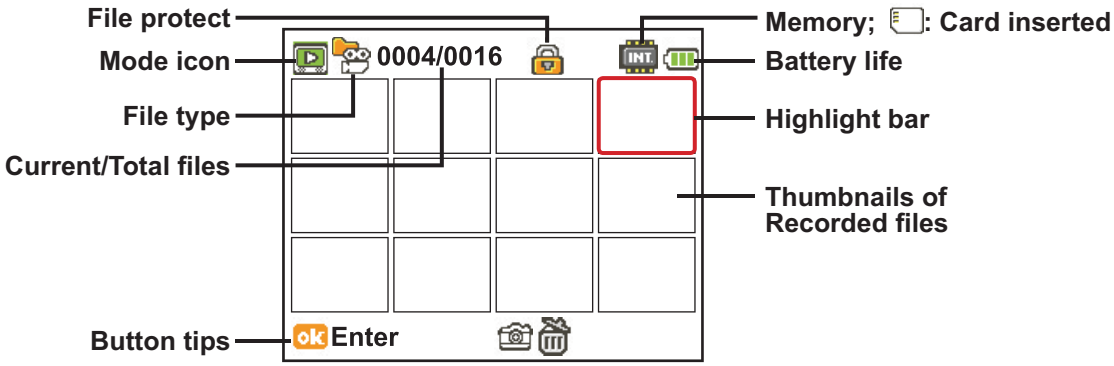
Note: To avoid sudden outage of power supply, you are recommended to replace the battery when the icon indicates low battery life.

Reading LCD indicators

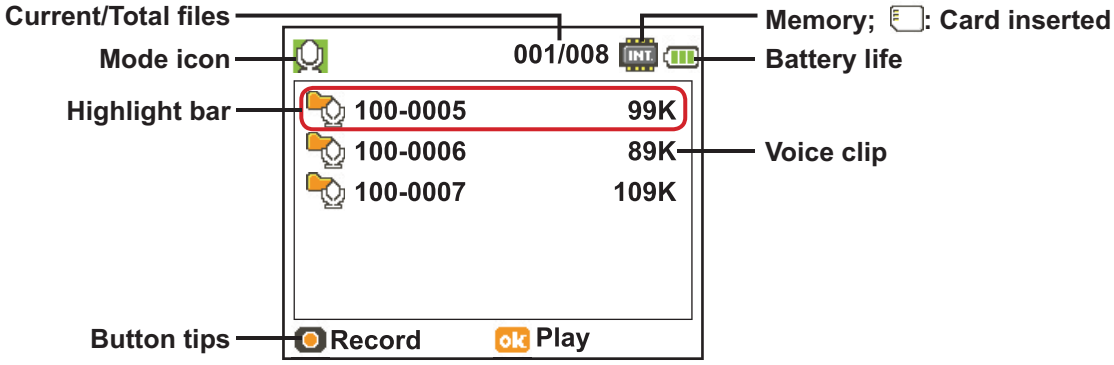
Camera mode:



My Works mode:



Voice Recorder mode:



Recording a video clip

1. Set the focus to an appropriate setting. Normally, you may set the focus to ( ) for most filming conditions. Select ( ) only for close-ups.
2. Press the **Record** button to start recording.
3. Use the **Zoom** buttons to zoom in or zoom out the screen.
4. Press the **Record** button again to stop recording.

Taking a still picture

1. Set the focus to an appropriate setting. Normally, you may set the focus to ( ) for most filming conditions. Select ( ) only for close-ups.
2. Use the **Zoom** buttons to zoom in or zoom out the screen.
3. Press the **Shutter** button to take a still picture.

	50cm ~ ∞
	30cm ~ 50cm

Recording a voice clip

1. Press the **Mode** button.
2. Use the **Zoom** buttons to select **Voice Recorder** mode.
3. Press the **Menu/OK** button to confirm.
4. Press the **Record** button to start recording.
5. When you are done, press the **Record** button again to stop recording.

Playing back your recordings

1. Press the **Mode** button.
2. Use the **Zoom** buttons to select **My Works** mode. Select the type of file you want to view in the sub items.
3. Press the **Menu/OK** button to enter.
4. Use the **Zoom** buttons to shift between files.
5. Press the **Menu/OK** button to review/play the file.

> ! Press the **Shutter** button to delete files.

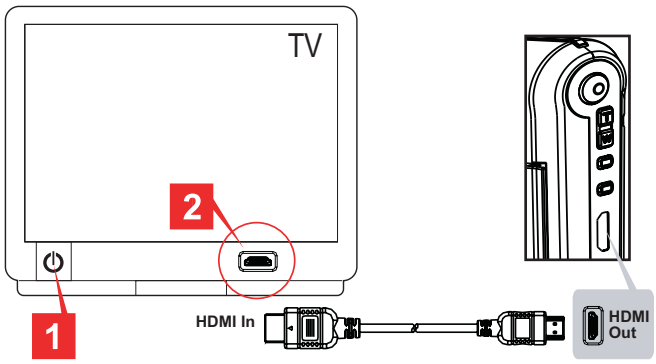
Playing back your recordings on PC

Please notice that the video clips are recorded in MP4 format. To view these videos on your PC, you may need to install some special programs. For first time use, please install the software on the bundled CD.

Connecting the camcorder to HDTV

Connect your camcorder and TV via the accessory AV cable for real-time display. You can display your video clips, still pictures, and audio recordings directly on your TV, sharing them with your friends and family.

TV : HDTV with HDMI input port

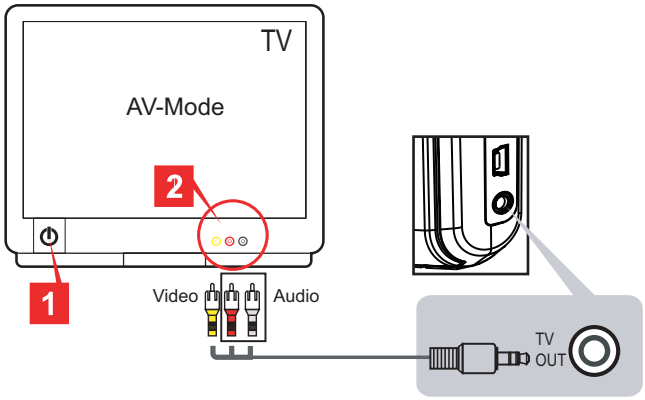


1. Turn on your HDTV.
2. Connect the HDMI-in connector (the bigger end) of the HDMI cable to the HDTV.
3. Turn on the camcorder.
4. Connect the other end of the HDMI cable to your camcorder.
5. Switch the HDTV to the “HDMI input” mode.

Connecting the camcorder to standard TV

TV : Traditional CRT TV

> ! The TV system is different across areas. If you need to adjust the **TV-out** setting, please refer to the “Advanced Operations” section for more information. (Taiwan: NTSC; America: NTSC; Europe: PAL; China: PAL)



1. Turn on your TV and switch the TV to AV mode.
2. Connect the audio and video ends of the AV cable to the TV.
3. Turn on the camcorder.
4. Connect the other end of the AV cable to your camcorder.

Connecting the camcorder to your PC

1. Turn on the camcorder.
2. Connect the camcorder to your computer by the USB cable.

> ! The default is set to “Disk” mode. When connected to a PC, the camcorder will automatically enter Disk (Removable disk) mode.
>
> ! If you set the USB Mode to “Menu” mode, the following items will appear.
>
> **PC Cam**
> **Disk**
> **Printer**
>
> Please select the desired connection mode.
>
> ! If you would like to change the setting, please refer to the “Advanced Operations” section for more information.

Playing MP3 music ★

★ For select model only. Please refer to the package printing for detailed specification.

Copy MP3 files to the camcorder ★

Note: Before you can play MP3 music, you need to copy MP3 files to the camcorder first.

1. Turn on the camcorder, and connect the camcorder to a PC using the USB cable.
2. After the camcorder is connected to the PC, double-click on **My Computer** and you will find a removable disk. Create a “MUSIC“ folder in the disk and then copy MP3 files into the “MUSIC“ folder for playing.

Playing music in Music Player mode ★

1. Press the **Mode** button.
2. Use the **Zoom** buttons to select **Music Player** mode.
3. Press the **Menu/OK** button to confirm.

Operations in Music Player mode:

How to...	Action
Shift between tracks	Use the **Zoom** buttons to move up or down.
Start playing	Press the **Menu/OK** button.
Pause/Resume playing	During playing/While paused, press the **Menu/OK** button.
Adjust sound volume	Use the **Zoom** buttons to move up or down while playing.
Stop playing	During playing, press the **Mode**/⮌ button.
Delete files	Press the **Shutter** button.

Displaying lyrics ★

You can play MP3 songs with lyrics displayed. To enable the function, you need to copy LRC format files into the “MUSIC” folder, and name the LRC files after their matched songs. For example, if a song is named A.MP3, then the LRC file should be named A.LRC. You can search the Internet for your desired lyrics files. The LRC file contains both lyrics as text and time tags, so that the music and lyrics can be synchronized. This camcorder supports LRC files with “line time tags”.

Note: The format of time tag denotes [minutes]:[seconds]:[milliseconds].

Advanced Operations

Using menu

The menu items provide several options for you to fine-tune your camcorder functions. The following table gives details on menu operations:

How to...	Action
Bring up the menu in each mode	Press the **Menu/OK** button. Note that this step is not necessary in the **Setting** mode.
Move the highlight bar	Use the **Zoom** buttons to move up or down.
Confirm an item	Press the **Menu/OK** button.
Exit menu/Go back to upper menu	Press the **Mode/⮌** button (when in sub-menu).

Menu items in Camcorder mode (1)

Power-on → Press the **Menu/OK** button.

Item	Option	Description
* Video Resolution	Please refer to the package printing for resolution specification.	
* Picture Resolution	Please refer to the package printing for resolution specification.	
Flash Strobe	Auto	The flash automatically fires when the lighting is insufficient.
	On	The flash is forced to fire in every shot.
	Off	The flash is disabled.
NightShot	On/Off	This setting allows you to take a photograph with a dark background. Since the shutter speed will slow down when taking photographs at a dark place, we recommend using a tripod to eliminate blurring from hand shake.
Stabilizer	On/Off	Minimize blur caused by hand shake.
EV	-2~+2	Manually adjust the exposure to gain better effect when the preview image appears too bright or too dark. A positive value indicates the image will be brighter than usual; while a negative value makes the image dimmer.
Selftimer	On/Off	Enable the selftimer. After the selftimer is turned on, the camcorder will have ten seconds delay before recording when the Shutter button is pressed.

Menu items in Camcorder mode (2)

Item	Option	Description
White Balance	Auto	The camcorder automatically adjusts white balance.
	Sunny	This setting is suitable for outdoor recording in sunny weather.
	Cloudy	This setting is suitable for recording in cloudy weather or shady environments.
	Fluorescent	This setting is suitable for indoor recording with fluorescent lamp lighting, or environments with high color temperature.
	Tungsten	This setting is suitable for indoor recording with incandescent lamp lighting, or environments with low color temperature.
Effect	Normal	Make recordings in natural color.
	Black&White	Make recordings in black and white.
	Classic	Make recordings in sepia-toned color.
Photo Frame	0 - 10	This setting allows you to add customsized frames to photos. 10 background frames (1-10) are available on the LCD monitor. Set 0 to disable this function.

- The “Photo Frame” option and zoom function will be disabled when the picture resolution is set to 12M.
- The “Video resolution” and “Picture resolution” menu items are model-dependent. Please refer to the package printing for detailed specifications.

Menu items in My Works mode

Power-on → Press the **Mode** button → Enter **My Works** mode → Press the **Shutter** button.

Item	Option	Description
Delete One	Yes/No	Delete current file.
Delete All	Yes/No	Delete all files of the same type stored in the memory.
Lock	On/Off	Enable/Disable protection of the selected file.
* Repeat all	-	Start picture slideshow. / Repeat playing all video clips.
** Background Music	On/Off	Enable/Disable playing MP3 music while viewing pictures.
** Set Start-up Picture	-	Use the selected picture as the start-up screen (when the camcorder is powered on).
*** Repeat	Off/Single/All	Enable/Disable repeat play of current file/all files.

* For videos and pictures. ** For pictures only. *** For voice files only.

Menu items in Setting mode (1)

Power-on → Press the **Mode** button → Enter **Setting** mode.

Item	Option	Description
Clock	-	Set date and time.
Date Stamp	On/Off	Enable this feature to print a date mark on each picture.
Language	-	Lets you select the language used for OSD.
Beep	On/Off	Enable beep sound on/off.
Start Movie	Off	Toggle start screen off.
	On	Use the default start screen.
	* Custom	Use a custom picture as the start screen. This item does not show up until you have set up the start-up picture.
Icon	On/Off	Enable/disable OSD icons to display on the screen.
LCD Brightness	0 ~ 4	Set LCD brightness. A greater value makes the LCD brighter; while a smaller value makes the LCD dimmer.

Menu items in Setting mode (2)

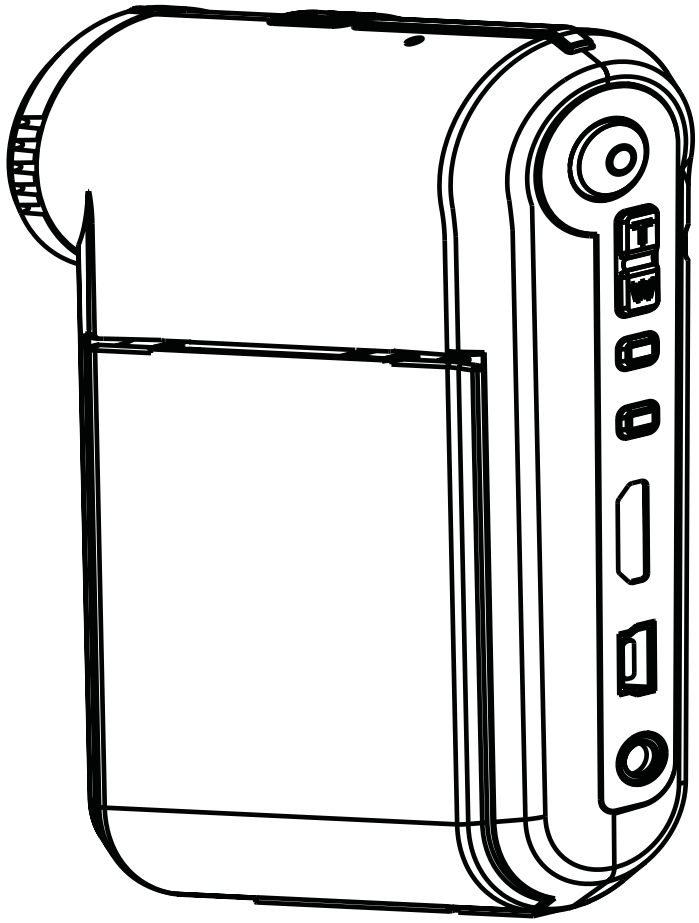
Item	Option	Description
TV System	NTSC	Set TV system compatibility to NTSC. This option is suitable for America, Taiwan, Japan, and Korea areas.
	PAL	Set TV system compatibility to PAL. This option is suitable for Germany, England, Italy, Netherlands, China, Japan, and Hong Kong.
Flicker	50Hz/60Hz	Set flicker frequency to 50Hz or 60Hz. For more information, please refer to the "**Flicker Settings**" table.
Auto Off	Off 1min/3min/ 5min	Set how long the camcorder will automatically shut down when staying inactive. Setting to [Off] will make the camcorder stay powered on until it runs out of power.
USB Mode	Menu	When connected to a PC, the camcorder displays a menu for you to choose a desired connection mode.
	PC Cam	When connected to a PC, the camcorder automatically enters Camera (PC camera) mode.
	Disk	When connected to a PC, the camcorder automatically enters Disk (removable disk) mode.
	Printer	When connected to a PC, the camcorder automatically enters printer connection mode.
Format	Yes/No	Format the storage medium. Note that all files stored in the medium will be gone.
Reset Default	Yes/No	Restore factory defaults. Note that your current settings will be overridden.

! Flicker Settings

Area	England	Germany	France	Italy	Spain	Russia
Setting	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Area	Portugal	America	Taiwan	China	Japan	Korea
Setting	50Hz	60Hz	60Hz	50Hz	50/60Hz	60Hz

Note: The flicker setting is based on the frequency standard of your local power supply.

Advanced Instructions



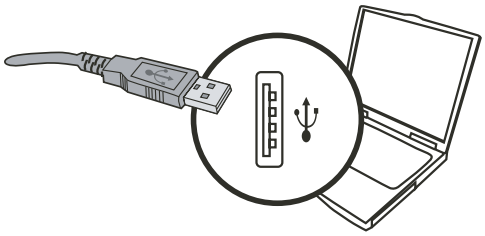
Digital Camcorder

English

Connecting to PC

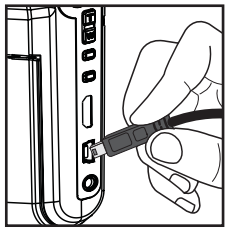
Connecting the camcorder to your PC

1. Turn on the camcorder.



2. Connect the USB cable to your computer.

Turn on your computer, and then connect the accessory USB cable to the USB port of your computer. Make sure the cable and the port are correctly aligned.



3. Connect the USB cable to your camcorder.

Connect the other end of the USB cable to your camcorder.

The default is set to "**Disk**" mode, if you would like to set other modes as default, please refer to "**USB Mode**" section for more information.

USB mode:

Power-on → Press the **Mode** button → Enter **Setting** mode.

USB Mode	Menu	The camcorder displays a menu.
	PC Cam	The camcorder automatically enters PC camera mode.
	Disk	The camcorder automatically enters Disk (removable disk) mode.
	Printer	The camcorder automatically enters printer connection mode.

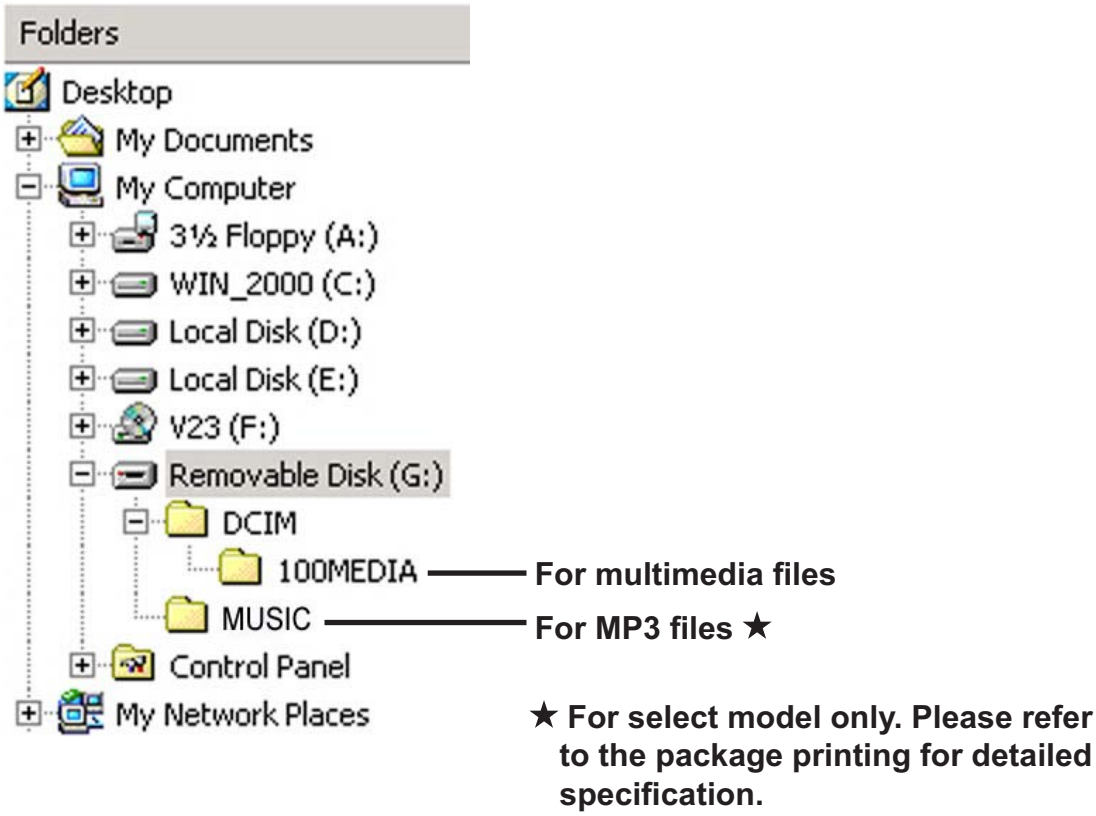
Notice for Windows XP/Vista users:

If you want to disconnect the camcorder from your computer, please follow these steps:

1. Double-click the USB connection icon in the system tray.
2. Click on the **USB Disk** item, and then click **Stop**.
3. Select the camcorder when the confirmation screen appears and click **OK**.
4. Follow the on-screen instructions to safely disconnect the camcorder from your computer.

File location

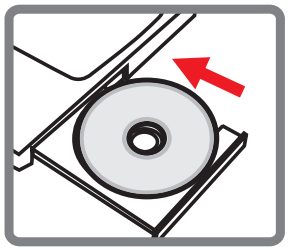
After connecting the camcorder to your computer, a removable disk will appear in your computer. The removable disk actually represents the storage medium of your camcorder. In the disk you can find all of your recordings. Refer to the figure below to see where the files are stored.



★ For select model only. Please refer to the package printing for detailed specification.

Using PC Camera

Installing the software



The PC camera driver is included in the accessory CD, and therefore you should install the driver before using the PC camera function.

Starting the application

1. Connect the camcorder to your computer.
Turn on your computer, and then connect the accessory USB cable to the USB port of your computer. Make sure the connector and the port are correctly aligned.

2. Switch to the Camera mode.

Connect the other end of the USB cable to your camcorder. Power on the camcorder, and the following items will appear on the screen:

1) : PC Cam.
2) : Disk (removable disk).
3) : Printer.

Select [PC Cam] and press the OK button to confirm.

3. Launch PC camera program.

After the camcorder is correctly connected to and detected by your PC, you are ready to launch your own favorite software (ex. MSN Messenger, Yahoo Messenger…) to use PC camera function.

Appendix

Troubleshooting

When using the camcorder:		
Problem	**Cause**	**Solution**
The camcorder can not be powered on normally.	The battery is out of power.	Replace the battery.
	The battery is incorrectly installed.	Re-install the battery.
Can not take pictures or video clips when pressing the Shutter or Record button.	Out of memory.	Free some space from the SD/MMC card or the internal memory.
	The camcorder is recharging the flash strobe.	Wait until the flash strobe is fully charged.
	Using a “protected” SD card.	Set the SD card to be writable.
The LCD screen displays “MEMORY ERROR” or “CARD ERROR” message. Or the camcorder cannot read the memory card.	The format of the memory card is not compatible with the camcorder.	Use the camcorder “Format” function to format the card.
	The memory card is corrupted.	Replace the memory card with a new one.
I did not delete the pictures and video clips, but can not find them in the memory card.	The lost recordings are saved in the internal memory.	It happens when you insert a memory card after taking a few pictures or video clips. You can access those files after removing the memory card.

Appendix

When using the camcorder:		
Problem	**Cause**	**Solution**
Cannot use the flash strobe.	If the battery icon indicates low battery, the flash strobe may be disabled due to insufficient voltage.	Replace the battery.
The camcorder does not respond to any action during operation.	The camcorder encounters software failure.	Remove the battery pack and replace it into the compartment. Then power on the camcorder.
The recorded pictures appear too blurred.	The focus is not correctly set.	Adjust the focus to an appropriate position.
The recorded pictures or video clips appear too dark.	The environment of shooting or recording does not have adequate light.	Use flash strobe when taking pictures. Add extra light sources when recording video clips.
Noises occur when viewing images on the LCD screen or on the computer.	The flicker setting does not match the standard of the country you are staying.	Adjust the flicker setting. For more information, please refer to the "**Flicker Settings**" table.
I want to restart the serial number of the file name (PICTxxxx).	The counting of the serial number is handled by the camcorder firmware.	Use the camcorder "**Format**" function to format the card.
I convert a media file and name it as PICTxxxx.* (xxxx indicates number). Then I copy the file to the camcorder but cannot find it on the camcorder.	There is another file with duplicate serial number (e.g. PICT0001.MP4 and PICT0001.JPG), or the file type is not supported.	Give the file a distinctive serial number and make sure the file type is supported by the camcorder.

Appendix

When connecting the camcorder to the computer or TV:		
Problem	**Cause**	**Solution**
I cannot view the video clips on my computer.	Driver or software is not installed on the computer.	Install *Direct X 9.0c* or above and *Windows Media 9.0 Codecs* to solve this problem. Install the software and driver in the bundled CD, or go to http://www.microsoft.com to download the required files.
Driver installation failed.	The installation is terminated abnormally.	Remove the driver and other related programs. Follow the installation steps in the manual to re-install the driver.
	The camcorder has been connected to the PC via the USB cable before installing the driver.	Install the driver before plugging in the USB cable.
The TV screen does not display after connecting the camcorder to the TV.	The camcorder is not correctly connected to the TV.	Reconnect the camcorder to TV correctly.
A conflict with other installed camcorder or capture device occurred.	The device is not compatible with the camcorder.	If you have any other camcorder or capture device installed in your computer, please completely remove the camcorder and its driver from the computer to avoid the conflict.
Noises occur on my computer screen when using Video Conferencing.	The flicker setting does not match the standard of the country you are staying.	Adjust the flicker setting. For more information, please refer to the "**Flicker Settings**" table.

Appendix

Battery Life

Still picture	Video clip
Number of shots	Recording time (minute)
240	100
* shoot every 30 seconds ** flash is on *** resolution is set to 5M	* resolution is set to VGA (640x480 pixels)

Note: This table is for your reference only. The actual battery life depends on your battery type and recharge level.

Storage Capacity

*** Please refer to the package printing for the specification of your model.**

Memory	Video (min.)				Audio (min.)
	HD	DVD	VGA	QVGA	Maximum
SD/MMC card (512MB)	9	12	28	102	340
SD/MMC card (1GB)	18	25	55	200	666
SD/MMC card (2GB)	36	50	110	400	1332

Memory	Still picture		
	3M	5M	12M
SD/MMC card (512MB)	640	426	176
SD/MMC card (1GB)	1250	833	344
SD/MMC card (2GB)	2500	1666	688

Note: The actual value of capacity may vary (up to ± 30%) depending on the color saturation and complexity of your subject and surroundings.

The contents in this manual are subject to change without prior notification.

Appendix

System Requirements

Windows XP Service Pack 2 or Vista

512MB of system memory, 1GB is recommended

Nvidia Geforece 7600 / ATI X1600 or above with 256MB of RAM

2.8 GHz Pentium 4 or faster processor

HDCP compliant display devices

CD-ROM SPEED: 4X or above

Other: USB connector